REMARKS

Claims 1-12 are pending in this application with claim 1 being amended by this response.

Rejection of Claims 1-4, 6 and 9 under 35 § 102(b)

Claims 1-4, 6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Grybos et al.

The present claimed invention recites a source-antenna for transmitting/receiving electromagnetic waves. The antenna includes, on a support, an array of n independent radiating elements operating in a first frequency band and an element with longitudinal radiation operating in a second frequency band and situated at the center of the array. The longitudinal radiation element has an axis of radiation and each independent radiating element has a respective axis. The array of n radiating elements and the element with longitudinal radiation have a substantially common phase center. The n radiating elements are arranged symmetrically about the longitudinal-radiation element. Each radiating element of the array consists of a traveling wave antenna.

The present invention as claimed in amended claim 1 now clearly shows that the n radiating elements, i.e. the 4 helices (11) or the 8 helices (30) are independent, each having their own axis of radiation. The radiating elements are not concentric.

Grybos et al. describe a multiband concentric helical antenna. More specifically, Grybos et al. describe two systems:

1) The first system as shown in Figures 3 and 4 of Grybos et al. includes "quadrifilar" helical elements 22. These elements form an outer helix and have a common axis as is clearly shown in the figures. Furthermore, as mentioned in column 7, line 35, an inner helix 24 is placed concentrically within the outer helix 22. This is contrary to the present claimed invention.

2) The second system shown in Figures 7 and 7B include three monofilar helical elements 22, 24, 25. The three elements are concentric to each other and have, in fact, the same axis. This is unlike the present claimed invention in which "each independent radiating element having a respective axis".

Due to this structure in Grybos et al., there is a strong interaction of radiation even if the operating frequencies present an important gap. Grybos et al. neither disclose nor suggest a "longitudinal radiation element having an axis of radiation and each independent radiating element having a respective axis" as in the present claimed invention.

In view of the above remarks and amendments to claim 1, it is respectfully submitted that claim 1 is not anticipated by Grybos et al. It is thus further respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of Claims 5, 8, 10 and 11 under 35 § 103(a)

Claims 5, 8, 10 and 11 are rejected under 35 § 103(a) as being unpatentable over Grybos et al. in view of Spencer.

Spencer is cited to disclose a printed circuit feed and waveguide feed for feeding a dielectric radiator. However, similarly to Grybos et al., Spencer neither discloses nor suggests a "longitudinal radiation element having an axis of radiation and each independent radiating element having a respective axis" as in the present claimed invention.

Thus, in view of the above remarks and amendments to claim 1, it is respectfully submitted that claim 1 is not unpatentable over Grybos et al. and Spencer when taken alone or in combination. As claims 5, 8, 10 and 11 are dependent on claim 1 it is respectfully submitted that these claims are patentable for the same reasons as claim 1. It is thus further respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of Claims 7 and 12 under 35 § 103(a)

Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grybos et al.

As discussed above regarding the rejection of claims 1-4, 6 and 9, Grybos et al. neither disclose nor suggest a "longitudinal radiation element having an axis of radiation and each independent radiating element having a respective axis" as in the present claimed invention.

Thus, in view of the above remarks and amendments to claim 1, it is respectfully submitted that claim 1 is not unpatentable over Grybos et al. As claims 7 and 12 are dependent on claim 1 it is respectfully submitted that these claims are patentable for the same reasons as claim 1. It is thus further respectfully submitted that this rejection is satisfied and should be withdrawn.

Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No additional fee is believed due. However, if an additional fee is due, please charge the additional fee to Deposit Account 50-2828.

Respectfully submitted,
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I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to the Mail Stop Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

3/4/04
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